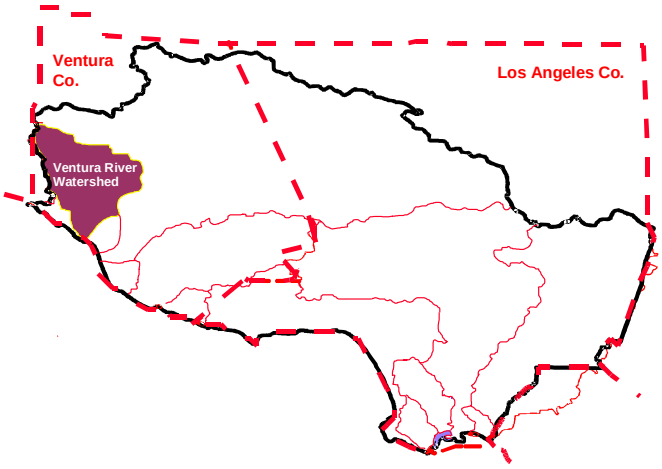
VENTURA RIVER WATERSHED

This was a targeted watershed for permitting purposes in FY95/96 and FY00/01.

Overview of Watershed



The Ventura River and its tributaries drain a coastal watershed in western Ventura County. The watershed covers a fan-shaped area of 235 square miles, which is situated within the western Transverse Ranges (the only major east-west mountain ranges in the continental U.S.). From the upper slopes of the Transverse Ranges, the surface water system in the Ventura River watershed generally flows in a southerly direction to an estuary, located at the mouth of the Ventura River. Groundwater basins composed of alluvial aquifers deposited along the surface water system, are highly interconnected with the surface water system and are quickly recharged or depleted, according to surface flow conditions. Topography in the watershed is rugged and as a result, the surface waters that drain the watershed have very steep gradients, ranging from 40 feet per mile at the mouth to 150 feet per mile at the headwaters.

Precipitation varies widely in the watershed. Most occurs as rainfall during just a few storms, between November and March. Summer and fall months are typically dry. Although snow occurs at higher elevations, melting snowpack does not sustain significant runoff in warmer months. The erratic weather pattern, coupled with the steep gradients throughout most of the watershed, result in high flow velocities with most runoff reaching the ocean.

Beneficial Uses in Watershed:

Estuary	*Above Estuary*
Navigation	Municipal supply
Commercial & sportfishing	Industrial service supply
Estuarine habitat	Industrial process supply
Marine habitat	Agricultural supply
Contact & noncontact water recreation	Contact & noncontact water recreation
Warmwater habitat	Warmwater habitat
Wildlife habitat	Wildlife habitat
Preservation of rare & endangered species	Preservation of rare & endangered species
Migratory & spawning habitat	Migratory & spawning habitat
Wetlands habitat	Wetlands habitat
Shellfish harvesting	Coldwater habitat
	Groundwater recharge
	Freshwater replenishment

Water Quality Problems and Issues

The majority of water quality problems involve eutrophication (excessive nutrients and effects), especially in the estuary/lagoon although some DDT and metals have been found in mussel and fish tissue (on the 303(d) list for these). A large storm drain enters the river near the estuary and homeless persons live in and frequent the river bed. Sediment in the estuary, however, appears relatively uncontaminated and in laboratory tests conducted through the Bay Protection and Toxic Cleanup Program, little sediment toxicity was found. In some subwatersheds, high TDS concentrations impair the use of water for agriculture. The watershed's water quality problems are, for the most part, nonpoint source-related. There have also been incidents of releases of toxic materials into storm drains entering the lower river.

The Ventura River Watershed

- Eutrophication concerns, especially in lagoon
- Some bioaccumulation of DDT and metals
- TDS concerns in some subwatersheds
- Impediments to steelhead trout migration (but much high quality habitat)
- More nonpoint source rather than point source problems

There is only one major discharger, a small POTW (3.0 MGD) in the middle reach of the Ventura River which has recently upgraded (end of 1997) to tertiary treatment The treatment plant effluent had been implicated in nuisance growth of aquatic plants and low dissolved oxygen found at times downstream of the discharge. For much of the year, the facility's effluent can make up two-thirds of the total river flow. The major concern was the facility's inability to meet the nutrients and suspended solids discharge limitations in its NPDES permit. Additionally, high biochemical oxygen demand (BOD) in the effluent resulted in dissolved oxygen concentrations in the river that could not support cold water aquatic habitat. The facility was required to upgrade under a Regional Board Cease and Desist Order. The most recent monitoring has shown the quality of the effluent has significantly improved including a reduction of nitrate-nitrogen from 20 mg/l to 4 mg/l, a reduction of suspended solids from 12 mg/l to 2 mg/l, and a reduction of BOD from 10 mg/l to 2 mg/l. DO levels in the river have improved dramatically to about 11 mg/l and algal growth is greatly reduced below the plant; however, nonpoint sources (agriculture and horse stables) still appear to be contributing to algal growth above the plant.

Permitted discharges:

- 5 NPDES discharges: one major (POTW) and four discharges covered by general permits
- 21 dischargers covered under an industrial storm water permit
- 4 dischargers covered under a construction storm water permit

Types of permitted wastes discharged into the Ventura River Watershed:

Nature of Waste *Prior* to Treatment or Disposal	# of Permits	Types of Permits
Nonhazardous (designated) domestic sewage & industrial waste	1	Major
Inert wastes from dewatering, rec. lake overflow, swimming pool wastes, water ride wastewater, or groundwater seepage	1	General
Nonhazardous (designated) wastes from dewatering, rec. lake overflow, swimming pool wastes, water ride wastewater, or groundwater seepage	3	General

Hazardous wastes are those influent or solid wastes that contain toxic, corrosive, ignitable, or reactive substances (prior to treatment or disposal) managed according to applicable Department of Health Services standards
Designated wastes are those influent or solid wastes that contain **nonhazardous** wastes (prior to treatment or disposal) that pose a significant threat to water quality because of their high concentrations
Nonhazardous wastes are those influent or solid wastes that do not contain soluble pollutants or organic wastes (prior to treatment or disposal) and have little adverse impact on water quality
Inert wastes are those influent or solid wastes that do not contain soluble pollutants or organic wastes (prior to treatment or disposal) and have little adverse impact on water quality

Major discharges are POTWs with a yearly average flow of over 0.5 MGD or an industrial source with a yearly average flow of over 0.1 MGD and those with lesser flows but with acute or potential adverse environmental impacts.

Minor discharges are all other discharges that are not categorized as a Major. Minor discharges may be covered by a general permit, which are issued administratively, for those that meet the conditions specified by the particular general permit.

The 5 NPDES permittees in the watershed all discharge to the main river.

Of the 21 dischargers enrolled under the general industrial storm water permit in the watershed, the majority are in the city of Ventura. Wineries and oil-related activities are most prominently represented. Most of the facilities are under ten acres in size.

The four dischargers under the general construction storm water permit are all on sites of less than ten acres.

Water diversions, dams, and groundwater pumping also are thought to limit surface water resources needed to support a high quality fishery. Reduced water supplies affect water quality and thus beneficial uses, particularly with regards to the endangered steelhead trout (steelhead trout are known to utilize the River and some of its tributaries historically supported annual steelhead runs of 5000 – 6000 adults). Removal of the Matilija Dam (upper river) has recently been identified as a high priority.

The table below gives examples of typical data ranges which led to the 1998 303(d) listings.

IMPAIRMENTS:

Impairments	Applicable Objective/Criteria	Typical Data Ranges Resulting in Impairment	303(d) Listed Waters/Reaches
DDT	Basin Plan narrative objective	23.0 ng/g (tissue)	Ventura River Estuary
Algae	Basin Plan narrative objective		Ventura River Reach 2 (Main St. to Weldon Canyon) Ventura River Reach 1 (estuary to Main St.) Ventura River Estuary
Pumping, Water diversions	Basin Plan narrative objective		Ventura River Reach 4 (Coyote Creek to Camino Cielo Rd.) Ventura River Reach 3 (Weldon Canyon to confl. w/ Coyote Cr.)
Copper	Basin Plan narrative objective	4.1 ug/g (tissue)	Ventura River Reach 2 (Main St. to Weldon Canyon) Ventura River Reach 1 (estuary to Main St.)
Silver	Basin Plan narrative objective	0.03 ug/g (tissue)	Ventura River Reach 2 (Main St. to Weldon Canyon) Ventura River Reach 1 (estuary to Main St.)
Zinc	Basin Plan narrative objective	40.0 ug/g (tissue)	Ventura River Reach 2 (Main St. to Weldon Canyon) Ventura River Reach 1 (estuary to Main St.)
Trash	Basin Plan narrative objective		Ventura River Estuary
Se	Basin Plan narrative objective	2.2 ug/g (tissue)	Ventura River Reach 2 (Main St. to Weldon Canyon)

CURRENTLY SCHEDULED TMDLS

Type of TMDL	Listed Waters/Reaches in TMDL	Year Scheduled for Completion (FY)
eutrophication	Ventura River Reaches 1 and 2 Ventura River Estuary	05/06

We see a need for an additional 1.3 PYs as well as $50,000 in contract dollars for FY02/03 TMDL work conducted in this watershed.

Stakeholder Groups

Ventura River Steelhead Restoration and Recovery Plan Group A Plan was developed in response to the listing of steelhead trout as an endangered species by the National Marine Fisheries Service (NMFS) in August 1997. The plan was developed 1) to identify measures to

mitigate impacts of ongoing operations and maintenance activities, 2) to identify future projects and, 3) identify and evaluate opportunities to promote recovery and restoration of the steelhead trout in the watershed. One staff person will continue to remain involved with the group, as needed.

Ventura River Habitat Conservation Plan (HCP) Group: The group, mostly comprised of resource agencies, cities, and water districts, began meeting in 2000. The cities and water districts involved all operate and maintain facilities that may affect sensitive resources or their habitats in the river. In order to comply with the Endangered Species Act they are engaging in consultation with the National marine Fisheries Service and US Fish and Wildlife Service and are in the process of developing a HCP that, with monitoring program and implementation agreements, would serve as the basis for an Incidental Take Permit.

Matilija Dam Steering and Executive Committees: The USACE, Ventura County Flood Control District, US Bureau of Reclamation, and other agencies and entities began convening in 2000 to begin discussions on the possible removal of Matilija Dam as part of an ecosystem restoration. An USACE and VCFCD sponsored feasibility study will begin shortly to consider the benefit to the ecosystem from various alternatives.

Significant Past Activities

In August 1997, the National Marine Fisheries Service (NMFS) listed the steelhead trout in Southern California as endangered under the Federal Endangered Species Act (ESA). The listing means that any project or action that may affect steelhead trout or their habitats will require consultation with NMFS to obtain an incidental take permit. In order to prepare for the listing and deal with possible regulatory requirements as a result of the listing, the Casitas Municipal Water District, City of Ventura, Ventura County Flood Control District, and seven other local public and private agencies collaborated and developed the **Ventura River Steelhead Restoration and Recovery Plan** in December 1997 (see above). The plan also contains large amount of background information on the watershed such as hydrology, biology, steelhead habitat conditions, and the operations and maintenance of water wastewater, solid waste, transportation and flood control facilities of the sponsoring agencies. The regulatory activities by the Regional Water Quality Control Board in the watershed were briefly reviewed in the plan.

Staff completed a *Preliminary State of the Watershed Report* for the Ventura River in 1995.

Permits in this watershed were renewed together in FY95/96 and again in FY00-01. The Ventura County Municipal Stormwater Permit was reissued in spring 2000.

Current Activities

The following is a summary of current regional board activities in the Ventura River Watershed which are expected to continue as part of the Watershed Management Initiative on a watershed basis.

CORE REGULATORY

Continuing core regulatory activities include compliance inspections, reviewing of monitoring reports, response to complaints, and enforcement actions as needed. Key regulatory staff will continue to remain involved in the Ventura River Watershed Team for purposes of coordinating watershed activities in-house and working on any needed State of the Watershed Report updates.

Additionally, most urban areas in Ventura County, including this watershed, are implementing Best Management Practices (BMPs) under the Municipal Storm Water Permit (revised in 2000). The "Discharger" consists of the co-permittees Ventura County Flood Control District, the County of Ventura, and the Cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura, Santa Paula, Simi Valley, and Thousand Oaks. The Discharger is required to implement the Ventura Countywide Stormwater Quality Urban Impact Mitigation Plan (SQUIMP), which requires the implementation of BMPs to reduce the discharge of pollutants in storm water from new development and significant redevelopment. Other requirements of the Municipal Storm Water Permit include a public education program, an educational site inspection program for industrial and commercial facilities, program for construction sites, public agency activities, and a storm water monitoring program.

The storm water monitoring program has consisted of land-use based monitoring, receiving water and mass emission station monitoring, and bioassessment. The Discharger also participates in regional monitoring activities, such as the Storm Water Monitoring Coalition, organized by the Southern California Coastal Water Research Project. Furthermore, the Discharger participates in the development and implementation of volunteer monitoring programs in the Ventura Coastal watersheds.

The Ventura River receives municipal storm drain discharges from the City of Ojai, City of San Buenaventura (part), and unincorporated Ventura County (part).

Currently under consideration are agreements with sister agencies in regulatory-based encouragement of Best Management Practices. Most notably is the use of a GIS layer for pesticides application available from the Department of Pesticide Regulation (DPR). Reduction of pesticides identified as contaminants of concern for a watershed might be addressed through a Management Agency Agreement (MAA) with the DPR, or through waiving adoption of waste discharge requirements on an individual basis using information gathered in databases provided by the Ventura County Agricultural Commission office.

MONITORING AND ASSESSMENT

A receiving water monitoring program is implemented by the Ojai Valley Sanitary District, supplemented by ambient or special monitoring conducted by Regional Board staff. The monitoring supports compliance evaluation, nonpoint source identification, and potential TMDL development. In conjunction with the receiving water monitoring, land-use based monitoring is done as part of the Ventura County Municipal Storm Water Program.

The Ventura County Environmental Health Department conducts weekly coastline bacteriological monitoring for total and fecal coliform and enterococcus at a number of stations along the Ventura County coast. There are two stations in the immediate vicinity of the Ventura River, one upcoast and one downcoast. Monitoring results are at posted at http://www.ventura.org/env_hlth/ocean.htm.

WETLANDS PROTECTION AND MANAGEMENT

The Southern California Wetlands Recovery Project considers the removal of Matilija Dam on Matilija Creek, a tributary to the Ventura River northwest of Ojai a priority project for funding. According to the US Fish & Wildlife Service, the removal would accomplish 1) restoration of the Ventura River ecosystem and contribute to recovery of endangered steelhead trout, 2) provide

needed sediment for beach nourishment and coastal erosion control, and 3) facilitate recreational access to Matilija Wilderness Area in the Los Padres National Forest. Other high priority projects involve land acquisitions of primarily riparian habitat at the mouth of the river (the Zellerbach Property) and removal of Arundo.

NONPOINT SOURCE PROGRAM

A priority issue is continued work to determine the scope of water quality impacts from agricultural runoff in the Region. Some agricultural activities occur in the Ventura River Watershed. Development of solutions to any impacts is also a high priority and will be a major concern of the nonpoint source program and, by extension, watershed groups which will be addressing this as well as other problems.

Staff will pursue re-initiating stakeholder meetings in the watershed and assist in development of a watershed management plan which will be expected to address strategies to reduce point and nonpoint source pollutants as well as issues other than strictly water quality concerns. In the meantime, staff will remain involved with the agencies that collaborated to develop a plan for restoration and recovery of anadramous steelhead trout in the watershed. An example of regulatory-based encouragement can be found in this plan development. Equestrian stables in the San Antonio Creek tributary of the river were identified by Regional Board and U.S. Army Corps of Engineers staff as existing and potential sources of problems in the watershed. Facility owners are working to improve their operations from a water quality standpoint in an effort to avoid implementation of management practices under Waste Discharge Requirements.

BASIN PLANNING

The 2001 Triennial Review identified adoption of TMDLs as Basin Plan amendments the highest priority issue that can be accomplished with current levels of funding. Approximately 0.5 PYs/TMDL would be utilized.

Basin Planning activities will include continued participation in both internal and external watershed planning efforts and further incorporation of watershed management and principles and watershed-specific priorities into future updates of the Basin Plan, where appropriate.

Review of and comment for the highest priority EIRs in the watershed will continue although this is currently an unfunded program.

WATERSHED MANAGEMENT

An update of the 1995 *Preliminary State of the Watershed Report* is underway.

Near-term Activities

Specific resource needs are described in the Region-wide Section of this document.

This watershed will be a focus for SWAMP monitoring in FY04/05.

Near-term **Basin Planning** issues include addressing impacts from hydromodification and pumping, particularly in steelhead trout restoration and dam removal efforts, and developing nutrient standards for the lagoon.

Potential Long-term Activities

Baseline watershed-wide bioassessment monitoring in this largely natural watershed will be an important component of any long-term planning and assessment. There are currently no funds for this type of activity.